

suffers but little inconvenience from the wounds. He states that when first wounded he suffered severely with pain in the left testicle and scrotum, and which occasionally ran down the same limb.

*May 1.* Both wounds are discharging but little, and the urine now contains pus, which escapes in clots. The general condition of the patient is improving.

*14th.* Was seized with a chill, followed by a fever of a miasmatic origin, with severe pain in region of liver. This was followed by an icteroid line over the upper portion of the body. This attack subsided in a few days under quinia treatment.

*June 1.* Wounds healing fast. Patient walking about the ward. Condition improving. Urine contains small quantities of pus.

*14th.* Last dressing applied. Wounds about healed. Urine nearly normal.

*July 26.* Wounds entirely closed; slight tenderness in regions of each. The urine is now normal. The patient goes about the hospital, and has walked over a mile with no inconvenience, feeling nearly as well in health as before the injury.

The treatment throughout has been simple dressings.

This case is interesting from the fact of liver and kidney both being wounded, rarely occurring as they do together, with so little detriment to the usual constitutional vigour.

*CASE II. Gunshot wound of the abdomen and kidney; recovery.*—Michael Savilio, Private Co. "E," 5th N. H. Vols., æt. 27, Russian, married.

Admitted to "Finley" April 19, from City Point, Va. Wounded April 6, 1865, at Farmville, Va., in battle, by a round ball. Physical constitution, at time of injury, good.

Gunshot wound, ball entering on left lateral side, five inches from median line, just outside of ninth rib on a line with the nipple, seven and a half inches below, passing backwards and emerging half an inch from spinous process of twelfth dorsal vertebra on left lateral side.

For a number of days after injury was confined to bed, and complained of severe pain in left testicle, which ran down the limb. There seemed to be at the same time a steady hemorrhage flowing into the pelvis of the kidney, which found its way out with the urine. After the subsidence of the hemorrhage some pus was observed with the urine, which soon disappeared with other aggravated symptoms, when the wounds healed rapidly.

*July 1.* Wounds entirely healed. A slight tenderness in region of wounds. Patient able to go about without inconvenience.

*August 1.* Feels no inconvenience from the wounds. Is now doing guard duty about the hospital. Constitution unimpaired by the injury.

FINLEY U. S. GENERAL HOSPITAL, WASHINGTON, D. C., August 1, 1865.

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**ART. XIV.—Case of Gunshot Wound through the Pelvis.** By D. WEBSTER PRENTISS, A. M., M. D., of Washington, D. C.

PRIVATE Dennis Driscoll, Co. D., 14th Connecticut Volunteers, aged 25 years, American. Good constitution. Wounded at battle of Hatcher's Run, Virginia, March 25, 1865, by Minié ball.

Wound of entrance: Anterior aspect of upper third of right thigh, six and a half inches below anterior superior spinous process of ileum; ball passing upwards and inwards into the pelvis, near the obturator foramen, over the urethra, to the left of the bladder, and out of the pelvis at or near the greater sacro-sciatic notch of the left side, striking in its course the ramus of the pubis and spine of the ischium, but missing the pelvic viscera, and finally lodging in the muscular substance of the gluteus maximus, just over the pyriformis muscle.

Previous to admission into the hospital, the only inconvenience complained of on the part of the patient was pain and tenderness in the hypogastric region, and a persistent inclination to evacuate the bowels. The shock of wound was inconsiderable.

When received into the hospital, on the 30th of March, the external wound appeared healthy; the discharge free, of dark, bloody pus, exhaling a decided fecal odour. The functions of the bladder were normal; the patient hopeful; pulse good, at about 90. The ball was discovered in the gluteus maximus of the left side, over the position of the greater sacro-sciatic notch; the place being pointed out by the patient himself from the pain, though it was not yet sufficiently distinct to justify an incision. The pelvic irritation and tenesmus continuing, a simple injection of warm water and Castile soap was administered, giving temporary relief. Cold water dressing was ordered for the wound.

During the week following, there was but little change in the patient. Irritation of the rectum and peritoneum supervened, when the bowels began to get costive, which was again relieved by the injection. The discharge assumed more the character of laudable pus, but still preserved its fecal odour.

The same state of things continued up to the 15th of April, the ball becoming more and more evident each day, the tumefaction around it increasing until the irritation was beginning to affect the general system. The appetite, which had at no time been very good, was getting worse, and the patient growing restless. A consultation was held, and it was determined to cut for the ball, which was done by Surg. B. B. Wilson, in charge of the hospital, by means of a vertical incision through the gluteus maximus, about an inch to the left of the sacro-iliac synchondrosis, extending from the posterior superior spinous process of the ileum downwards four inches. The muscle, at this point, was torn and bathed in pus. The ball, which had been distinctly felt previous to the incision, was not found in the muscle, but had evidently fallen back into the pelvis through the sacro-sciatic notch—an accident, the possibility of which had not been overlooked. On introducing the finger into the opening, the internal face of the spinous process of the ischium was found denuded of periosteum and roughened. A small fragment of bone, probably from the process, was removed from the substance of the gluteus maximus.

Exploration being made by means of Nélaton's probe, the ball was discovered at a distance of about seven inches from the orifice, and several ineffectual attempts made to grasp it with forceps; but it eluded their jaws, and finally disappeared again within the cavity. Subsequent search with probe, discovered necrosed bone at the opposite side of the pelvis where the ball entered, and very soon a fragment was brought out by the forceps, which was evidently from the symphysis of the pubes, having attached a portion of articular cartilage. Further search for the ball proved fruitless, and the patient was removed to his bed, stimulus ordered, and left

for the night. Chloroform was the anæsthetic used, and the operation was borne well.

On the morning of April 16th, the ball was found in bed, having *worked its own way out* during the night. The urine was high coloured and loaded with mucus; pain and tenderness extended over the whole abdomen; inflammation of the bladder and peritonitis were developed. Solutions of morphia and sweet spirit of nitre were administered, and partial relief obtained; stimulants and nutritious diet were continued.

The patient continued to do well under this treatment, the inflammation subsiding considerably, until April 20th, when a hard chill came on, followed by profuse perspiration; the pulse increased to one hundred and thirty, and was weak; the countenance assumed an anxious expression and icterode appearance; the patient grew restless and uneasy, and the mind wandering; *pyæmia* had set in. The stimulus was increased, and beef essence ordered.

On the 23d of April, the condition of things remained much the same; symptoms increased in intensity; pulse one hundred and sixty; retching and vomiting, in addition to other symptoms, treated with morphia. One pint of brandy was taken daily in the form of "eggnog;" the beef essence still continued. Inflammation of the bladder and peritoneum still continued, and the patient continued to sink, and died at 2 o'clock P. M., April 25th—involuntary evacuations occurring towards the last.

He lived thirty-one days after receiving the wound, and ten days after the operation.

*Autopsy*, held twenty hours after death. *Rigor mortis* well marked. *Heart* normal, large fibrinous clots found in both ventricles and extending down aorta. *Lungs* healthy. *Bowels* healthy. *Bladder* highly inflamed and thickened. *Peritoneum* very much inflamed, somewhat thickened, beginning to turn gangrenous, especially in those portions covering bladder and rectum. *Cavity of pelvis* infiltrated with bloody serum.

*Course of ball*, as determined by dissection: Wound of entrance, six and a half inches below anterior superior spinous process of ilium; ball passed inwards and upwards, directly through the symphysis pubes, leaving less than half an inch of the arch above united. From here it was deflected slightly downwards, passing over the membranous portion of the urethra, to the left of the bladder, beneath the external iliac vessels and psoas magnus muscle, striking the spine of the ischium, a portion of the coccygeus muscle, and finally lodging in the muscular substance of glutæus maximus.

*Remarks*.—There are several interesting points connected with this case which remain to be noticed.

1. The fecal odour exhaled in the discharge while there existed no wound to the rectum. That there was no wound of the rectum is indicated by the symptoms during life—the bowels being moved naturally, and no fecal matter in the discharge—and proved by the *autopsy*.

This confirms the statement of surgical writers, that matter confined in the vicinity of the anus acquires a fecal odour. Velpeau lays particular stress upon this, and asserts that the fecal odour of the pus is no evidence of a direct connection between the bowel and the abscess, the odour transuding through the coats of the intestine. (See *Dictionnaire de Méd.*, vol. iii. p. 311, Paris, 1833; also *American Cyclopædia of Pract. Med.* and

*Surg.*, vol. ii. p. 127, Philadelphia, 1836.) Velpeau published a case (*Archives Générales*, tom. xi. p. 337) in proof of this, and he has since met with several others. Bassereau relates similar cases (*Journ. Hebdom.*, tom. vii. p. 131).

I have myself, on several occasions, noticed the same thing in the discharge from abscesses, opening near the anus, and once since the occurrence of the above case, in a gunshot wound of the back, in which the ball was traced through the sacro-iliac symphysis; although in neither was there any reason to suppose that lesion of the rectum or colon existed.

2. The danger of cutting for the ball in the gluteal region in case of such a wound. In addition to the well-known danger of wounding the gluteal artery, which lies so deep, and the hemorrhage from which is so difficult to control, we have the liability of the ball to fall back again into the cavity of the pelvis.

The latter is the more difficult of the two to guard against, for while anatomy gives us the position of the vessels, which in this locality seldom varies, we must determine the depth and exact situation of the ball by the touch.

It would appear always best, in such a case, to wait until the ball ulcerates for itself a passage nearer the surface, keeping the patient in a position favourable to that process, and to avoid the danger of its falling back; or, at least, to wait until the urgency of the symptoms caused by its irritation should demand the incision; and during the operation all care should be taken to avoid so serious an accident.

3. The danger of probing within the cavity of the pelvis. The active cystitis and peritonitis immediately following the operation were undoubtedly due to this cause, although in this case it was certainly justifiable, the ball having been discovered, and within reach of forceps. The indication then was to remove it if possible, for, being movable in the cavity of the pelvis, it would undoubtedly have caused more irritation by its shifting about than a very considerable amount of probing would. The fact of its escaping during the following night could not of course be foreseen.

4. The slight symptoms following so serious an injury of bone. The ball passed through the pubes, flattening its point, and drawing the lead out over the concave surface of the posterior end, until that was more than half an inch deep; the spine of the ischium was knocked off, and a portion of the sacrum roughened. Yet there were no symptoms beyond the irritation of the bowels to indicate more than a flesh wound, until the irritation caused by the lodgment of the ball began to affect the general system.

Up to that time the pulse had been good, the spirits excellent, and the appetite fair, with no constitutional disturbance.

STANTON U. S. A. GEN'L HOSPITAL, D. C., August 9, 1865.